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Summary of PALCO's Commercial Rock Quarry Operations

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Introduction

PALCO currently conducts hardrock quarrying under conditional use permits and approved reclamation plans at two sites on its property. These sites are herein referred to as Rock Quarry 1/Road 24, and Rock Quarry 2/Road 9.

Rock Quarry 1/Road 24 is located in the Yager Creek drainage, approximately five miles upstream from Carlotta, California. The approved Humboldt County conditional use permit, reviewed pursuant to the California Environmental Quality Act ("CEQA"), and the approved mining and reclamation plan, reviewed pursuant to the California Surface Mining & Reclamation Act ("SMARA"), provide for a total production of approximately 125,000 cubic yards of aggregate material.

Rock Quarry 2/Road 9 is located in the Lawrence Creek drainage, Yager Creek watershed, and has been operated for many years for in-house use, prior to the approval of the conditional use permit which allows PALCO the flexibility to mine hard rock for commercial purposes. The volume of available material in Quarry 2 is estimated at approximately 450,000 cubic yards.

All quarrying operations involve excavation, drilling, blasting, screening, loading and hauling, and activities ancillary to the quarry operation include road relocation, erosion control, annual closure, and final reclamation. Operations at each quarry are seasonal, with most mining occurring from April through November. Minor quarrying may occur from December through March in response to local demand for material or the need to provide material for erosion control or road armoring activity as described in Chapter 6 of this SYP/HCP. These hardrock mining activities are more particularly described in the February 1997 Mining and Reclamation Plan prepared by Karen Theiss and Associates filed with this SYP/HCP and incorporated herein by reference.

PALCO ROCK QUARRY 1, ROAD 24

Quarry 1 is located in the Yager Creek Drainage, five miles upstream from Carlotta, more particularly, on AP No. 206-071-87, in the SE _ of SE _, Section 11, T2N, R1E, HBM, Hydesville, California, 7.5 minute USGS Quadrangle Sheet.

Access to the quarry from US Highway 101 is via State Route 36 to Main Yager Road (on PALCO's property) to Road 24. All access roads to PALCO's property are closed to traffic at the end of the work day.

Project Overview

On March 20, 1997, following environmental review pursuant to the California Environmental Quality Act ("CEQA"), the Humboldt County Planning Commission approved a Conditional Use Permit ("CUP") from Humboldt County for an existing rock quarry in order to produce aggregate material in compliance with the rules and regulations of the California Surface Mining and Reclamation Act ("SMARA") and to produce aggregate material for commercial use in addition to

on-going in-house use. This quarry has been operated for many years for in-house use under an agricultural exemption from Humboldt County. The CUP for this quarry allows PALCO the flexibility to mine aggregate for commercial purposes.

The expected life of the project is 15 years, or until the year 2012, with a total production of about 125,000 cubic yards of hardrock aggregate material. Commercial operation of the quarry commenced upon approval of Conditional Use Permit and Reclamation Plan by Humboldt County. Should extractable rock and/or aggregate stockpiles remain at the time of the proposed termination date, PALCO may apply for an extension of the approved Conditional Use Permit and Reclamation Plan.

The site will be revegetated with native species following closure of the quarry. The intended uses will include wildlife habitat and timber production. No future mining is planned subsequent to the extraction of 125,000 cubic yards of aggregate. Therefore, implementation of the reclamation plan will have no effect on future mining in the area. This quarry is located on private property and is not open to public access. The quarry is operated by PALCO under all prevailing standards and requirements of California Occupational Safety and Health Administration ("CalOSHA"). Operations pose no threat to public health and/or safety at this site.

Environmental Setting

PALCO Quarry Number 1 (Road 24) is located in central Humboldt County in the Yager Creek drainage, easterly of the town of Carlotta, as shown on Figure 1 attached hereto. Access is via Highway 36 to PALCO Access Road to Main Yager Road to Road 24; all roads past Highway 36 are on PALCO's property. Figure 2 shows the location of access roads in relationship to the nearest privately owned and occupied land, specifically the area north of the intersection of Fisher Road and the Access Road. The distance from this intersection to the quarry is about five miles (Figure 3).

Geology and Topography

The quarry site is located at an approximate 900-foot elevation on a northeasterly trending slope about 0.25 miles above the main stem of Yager Creek. Slopes are gentle, ranging between 16-30%. The geology of the area is mapped as upper Cretaceous marine sedimentary rocks which define the Yager Formation. This formation is characterized by dark gray mudstone, shale, graywacke, and conglomerate (Strand, 1962). The Geologic Map of California, Redding Sheet, shows that the nearest fault, the Yager Fault, is located more than one mile to the southwest of the quarry.

Soils

Soils in the project area belong to the Hugo Series. These acidic soils are derived from sandstone and shale, with a gravely loam on the surface and a stony clay loam subsoil (McLaughlin and Harradine, 1965). The California Department of Forestry (CDF) has developed an Erosion Hazard Rating System for use in evaluating potential erosion hazards associated with timber harvesting. The system uses a method of assigning rating factors to soil characteristics, depth, topography, protective vegetative cover and rainfall expectations. The CDF Erosion Hazard Rating calculation for the soils in the vicinity of this project is Low.

Hydrology

There are no streams or bodies of water on or adjacent to the quarry. There is a small stream confined to a very narrow drainage course, located about 200 feet to the southeast of the site.

Quarry operations, including vegetation removal, will not affect the creek or its associated vegetation. Yager Creek lies more than 0.25 miles downslope from the site.

Vegetation and Wildlife

There is very little vegetation in the area within the quarry boundaries. Plant species were inventoried by PALCO biologists in the vicinity of the project site in 1995, and re-examined during the spring of 1996 by Karen Theiss and Associates, Biological and Environmental Consultants, McKinleyville, California. Vegetation in the surrounding area is characterized by a moderate to dense cover of young growth coastal redwood (***Sequoia sempervirens***) and Douglas fir (***Pseudotsuga menziesii***) with a moderate shrub layer characterized by coyote brush (***Baccharis pilularis***), red huckleberry (***Vaccinium parvifolium***), and California blackberry (***Rubus ursinus***). The herbaceous layer is sparse to dense, depending on the exposure to sun. Dominant herbaceous species include yerba de selva (***Whipplea modesta***), yarrow (***Achillea millefolium***), wood strawberry (***Fragaria vesca***), inside-out flower (***Vancouveria hexandra***), sword fern (***Polystichum munitum***), and bedstraw (***Galium*** sp.). All species noted are characteristic of mixed evergreen and coastal redwood forest habitat types. No rare, threatened, endangered or sensitive species were noted during field review.

A wildlife inventory was conducted by PALCO biologists in the vicinity of the project site in summer and fall of 1995. There were no known spotted owls then located in the area or within a 0.5 mile of the quarry. The closest occupied marbled murrelet habitat was then determined to be about 0.5 miles from the quarry. Consultation with the California Department of Fish and Game (DFG) for this species was conducted on Side 8, several miles upstream from Road 24 Quarry. The following observations and recommendations were made by Ken Moore, Environmental Specialist III of DFG:

- blasting is to occur between September 15 and April 1;

- the loading of smaller aggregate into empty trucks prior to large rock lessens the impact of the large rock, and "is not particularly noisy or disruptive"; no changes or mitigation is required as long as this operating procedure is followed;

- the noise generated by the back gate striking the body of the dump truck should be mitigated by one of several methods: 1) pulling away from the dump site slowly, 2) padding the area between the gate and the body, or 3)removing the back gate from the body of the truck.

Bald eagle (***Haliaeetus leucocephalus***) winters along the lower reaches of Yager Creek on a regular basis between November 15 and February 15. PALCO avoids blasting at the quarry during this period. Should an emergency or unusual situation arise, PALCO will prepare a site-specific blasting plan to submit to DFG and the U.S. Fish and Wildlife Service (“USFWS”) which will be designed to minimize and/or avoid impacts on the bald eagle.

The California red-tree vole (***Arborimus pomo***), a California Species of Special Concern, was detected at this site. This species is generally arboreal, but has been trapped by PALCO biologists in late afternoon and at night during rainy periods. It may be surmised that the species disperses during such periods to avoid predators.

Archaeological and Historical Resources

A phase I archaeological report was prepared for the quarry by Mary Rice, a local consulting archaeologist. According to her report, which has been filed with the Humboldt County Planning

Department, there are no recorded sites within a one-mile radius of the quarry. No evidence of cultural value was identified during her field review.

Climate and Air Quality

This quarry site is located in an undeveloped rural setting. The climate is characterized by cool, rainy winters and warm, dry summers; annual rainfall is approximately 50 inches per year. Activities which could locally affect air quality at this site are blasting, excavation, loading, and hauling. At present these activities are mitigated by regular, periodic application to the site and access road with water during dry weather operations.

Noise

This quarry site is located in a timbered area, miles away from residences or other areas of human use. Activities and equipment which generate noise include blasting, drilling, excavation, loading, and hauling. Drilling and blasting occur infrequently; instantaneous noise levels from rock blasting reach an approximate peak of 100 dBA at the quarry (Newman, 1995). Most of this noise is reflected and absorbed by the surrounding vegetation, with noise levels falling off rapidly with increasing distance from the source.

As detailed in PALCO's approved Mining and Reclamation Plan, filed herewith, a noise analysis of various components of a gravel operation was completed by Mullins Acoustics for Canevari Timber Company in 1993. Noise levels generated by trucks and earth movers (e.g., bulldozers) ranged from 55 to 71 dBA at a distance of 450 feet across level land with little intervening vegetation. The noise generated by trucks hauling on the Yager Creek Road is attenuated fairly rapidly due to roadside vegetation.

Land Use

The quarry and surrounding lands are zoned TPZ (“Timber Production Zone”). In Humboldt County rock quarries are a compatible use on lands zoned for timber production. Following closure of the quarry, the site will be reclaimed and revegetated with native species compatible with vegetation in the surrounding area. Commercial timber species will be planted in an attempt to realize the potential future use as commercial timberland.

Aesthetics

The quarry site is located on private property with no access to the public, and there are no known vantage points from which the public could view the site. No visual or aesthetic impacts from or to the proposed mining operation are expected.

Roads and Traffic

Primary access to the applicant's property is via Highway 36, as shown on Figures 1 and 2. The access route to be used from Highway 36 to the quarry will be via PALCO Access Road to Yager Main Road to Road 24, all of which are owned and maintained by PALCO. Existing use of these roads is truck traffic primarily associated with timber management.

Mining Plan

The existing quarry includes the access road off of Road 24, stockpile areas on the quarry floor, and unworked rock areas. As part of the Use Permit PALCO was authorized to extend the

boundary of the unworked areas about 80 feet to the southeast and about 240 feet to the southwest, and to relocate a section of Road 24 about 150 feet to the southwest. The pre-existing quarry was about 1.5 acres in size; the expanded quarry encompasses about 3.5 acres. Figure 4, the Site Map, shows the existing quarry area at the time of Use Permit approval in March 1997, an established benchmark, the proposed boundary for the expanded quarry, and the proposed road relocation. Figure 5, Project Layout, shows the area in more detail.

The volume of available material within the expanded boundary is estimated at 125,000 cubic yards. It is proposed to operate the quarry over a 15 year period in order to best accommodate PALCO's need for material to accomplish road armoring, storm proofing and other mitigations detailed in this SYP/HCP, as well as fluctuations in market conditions and demand. A 15-year life allows for an average annual extraction rate of 8350 cubic yards. The annual duration and intensity of quarry operations fluctuates seasonally and in response to market demand for the aggregate products and need for material to perform road storm proofing to implement sediment control mitigations as described in Chapter 6 of this SYP/HCP. Figures 6 and 6A, Cross-Sections, show the pre-existing and final grades of the quarry at different transects through the site (Figure 4 shows the location of the transects through the site).

The quarry operations will involve excavation, drilling, blasting, screening, loading and hauling. Activities ancillary to quarry operation include road relocation, erosion control, annual closure, and final reclamation. Any materials hauled off of the property are transported by truck down Yager Main Road to State Highway 36. From here the material is hauled by truck to its destination, or it is loaded onto rail cars for transport. The rail line runs through the PALCO log deck at Carlotta, and there is already an aggregate storage and loading area designated within the yard. The material is primarily used for slope stabilization, bedding and road base.

Site Preparation - All large woody vegetation has been removed from within the project boundaries. Remaining small woody vegetation will be removed from the site for disposal.

Excavation - The pre-existing rock face is about 40 feet high. The existing "floor" will be quarried down (vertically) a maximum of 20 feet, with a finished grade of 2% sloping to the northeast, away from the toe of the slope. The existing rock face will be excavated horizontally into the slope about 50 feet, with benches located sporadically on the cut slope, as shown on Figure 6. The benches will be 8 to 12 feet wide, a maximum of 50 feet high, and will slope to the outside. The excavation into the slope will require relocation of Road 24 about 50 feet to the southwest, as shown on Figures 4 and 5.

Processing - There will be initial processing of hardrock aggregate through a Grizzly screener, which sorts the material by size. The larger, desired material is carried by away from the screener by conveyor, while the remaining overburden falls off the side. Both materials are then transported away for use or storage. The screening process results in an increase in the ambient noise level due to shaking of the material. Noise levels generated by a washer/shaker at the Canevari Gravel Processing Plant on the Eel River (described above and in the PALCO Mining and Reclamation Plan approved in 1997), were measured at 64 dBA at a distance of 450 feet across level land with little intervening vegetation. The vegetation surrounding the PALCO quarry site attenuates the noise significantly in all directions except toward the northeast.

Water Requirements - Water is used for on-site dust control, and will be administered from a tanker truck. The site is sprinkled one to several times per day, depending on the weather. Sprinkling will occur more frequently during the late summer and early fall.

Men/Equipment - There are generally two to three employees working at the quarry on a regular basis. During maximum production, there may be from ten to twelve trucks hauling aggregate from the site per day.

Safety - Applicable Occupational Safety and Health Administration ("OSHA") regulations are in place and enforced during the life of the operation. Personnel are supplied with protective masks and hearing protection for use during operation of equipment and during blasting.

Solid Mine Waste - There is no solid waste generated as a result of this project. Most of the project area has been cleared of woody vegetation; remnant saplings and shrubs are removed from the site for disposal. Herbaceous species are removed and stockpiled on-site with the overburden. There is no mineral waste; all material is either overburden or aggregate. Periodically, the sedimentation pond is excavated, and the fines stockpiled for eventual use in final closure of the site.

Waste Water - Very little if any wastewater is produced. The water used for dust control is absorbed by the finer silt and clay fractions or evaporates.

Water Impoundments/Diversions - All runoff from the site is routed to the sedimentation pond in the northeasterly corner of the quarry, as shown on Figure 5. A run-off control berm has been constructed at the downslope edge of the quarry to ensure that there is no surface flow off of the site. This berm and the sediment pond is maintained throughout the life of the project

Contaminants - No naturally occurring contaminants, such as heavy metals, are produced as a result of this project. No fuel or other petroleum products are stored on site.

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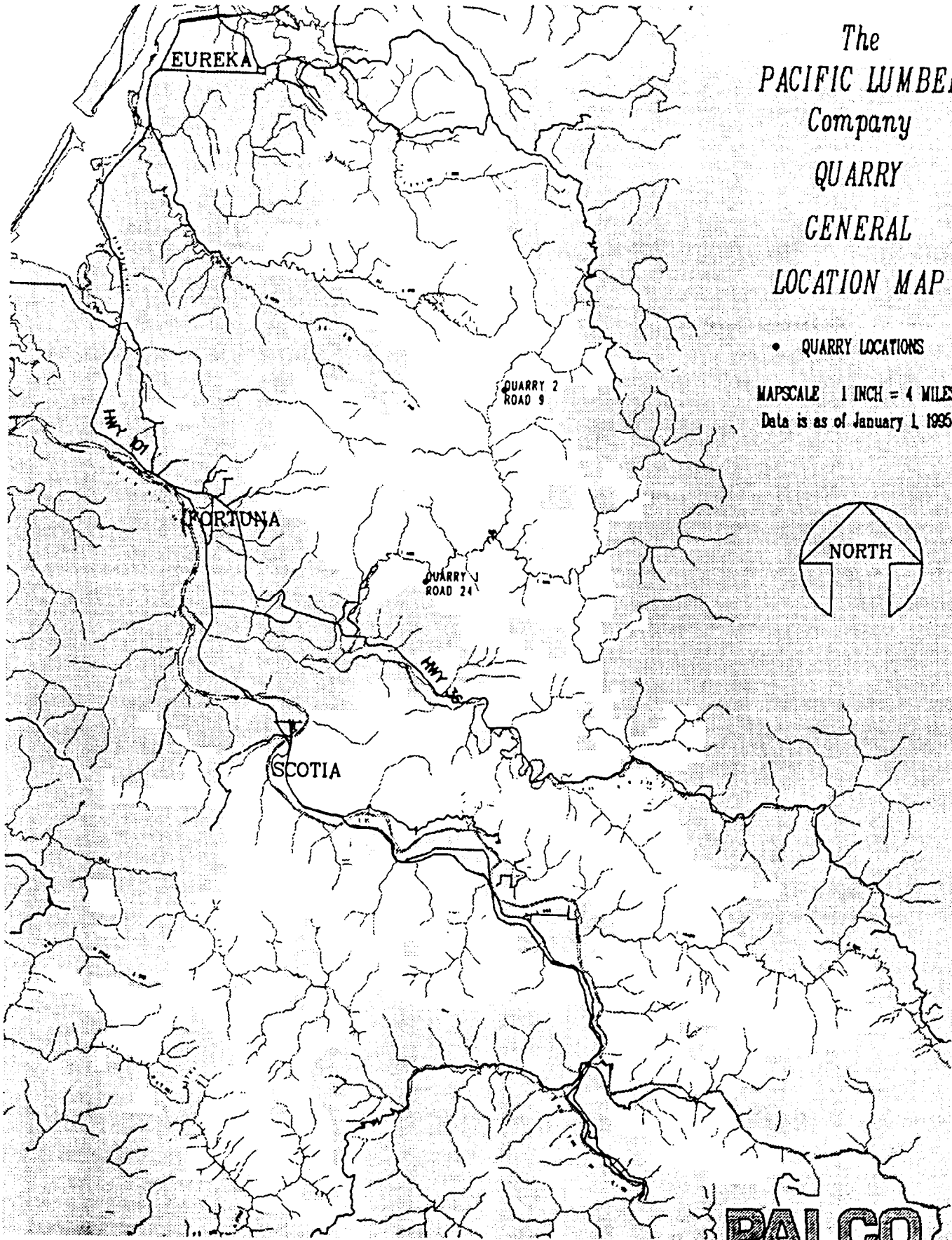


The
PACIFIC LUMBER
Company
QUARRY
GENERAL
LOCATION MAP

• QUARRY LOCATIONS

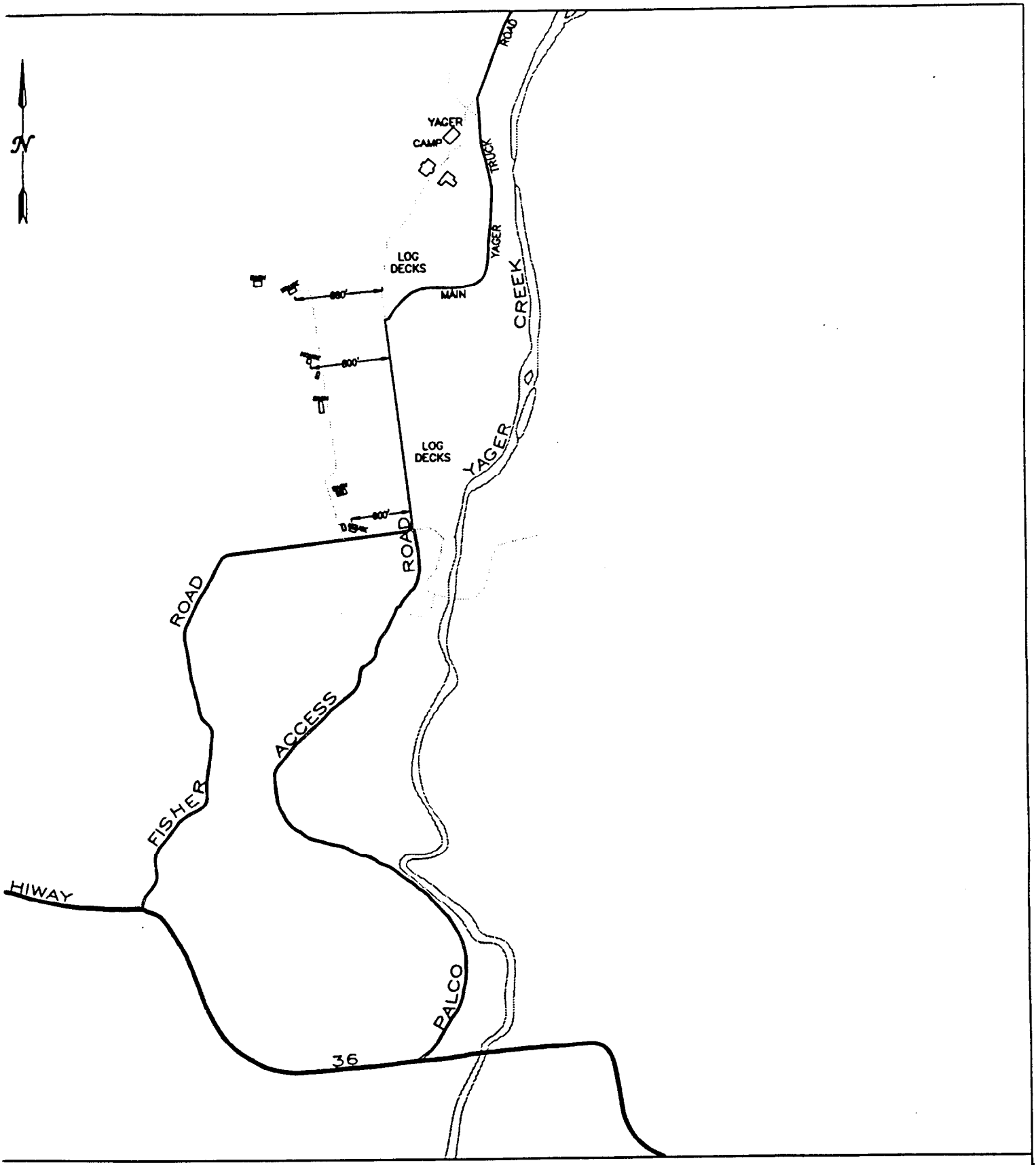
MAPSCALE 1 INCH = 4 MILES
Data is as of January 1, 1995

PALCO

Map and Analysis by Wayne Rice - 04/29/96

FIGURE

Road 24 Quarry 1



PALCO

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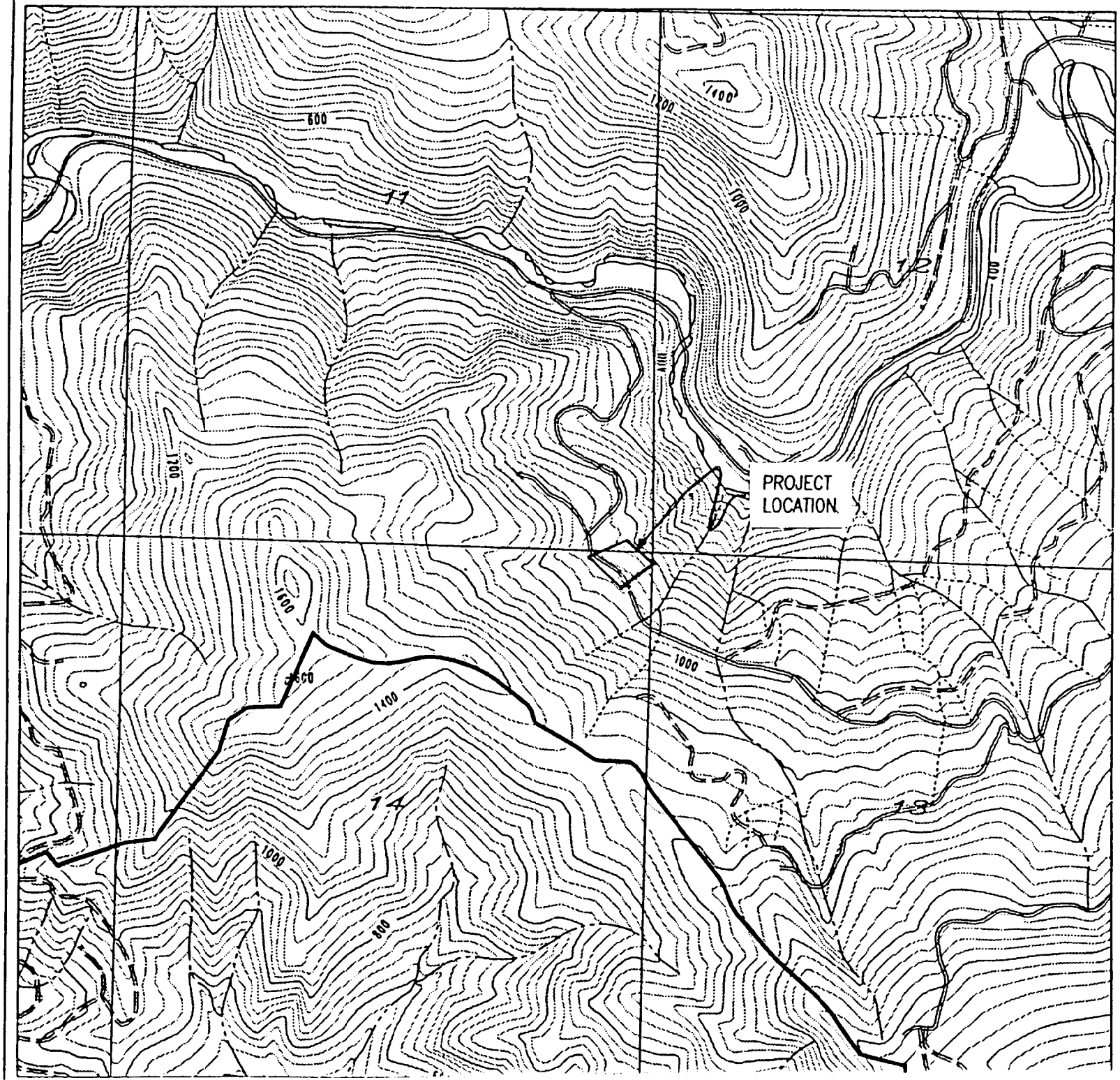
		FIGURE
DESCRIPTION: SITE ACCESS MAP		2 △

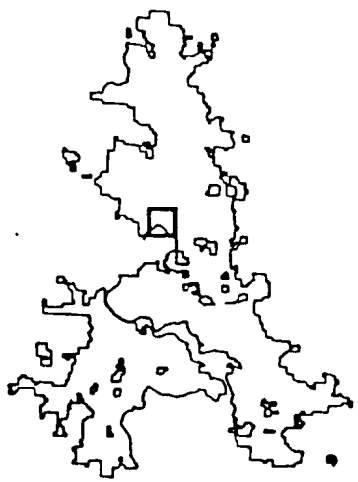


PROJECT LOCATION
QUARRY 1
ROAD 24
YAGER CREEK

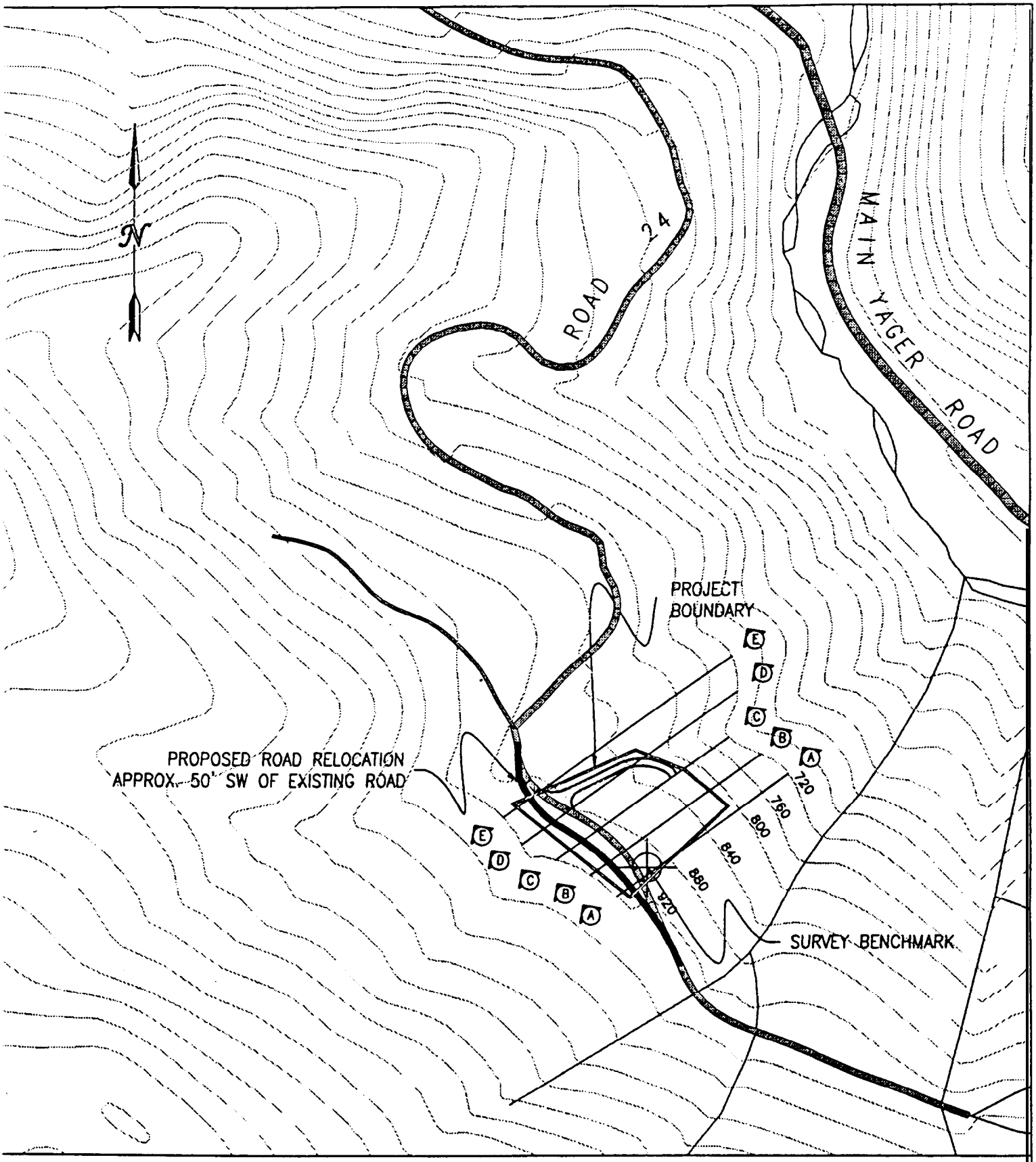
Figure 3

Scale 4" = 1 mile

Lands of the Pacific Lumber Company



PALCO



PALCO

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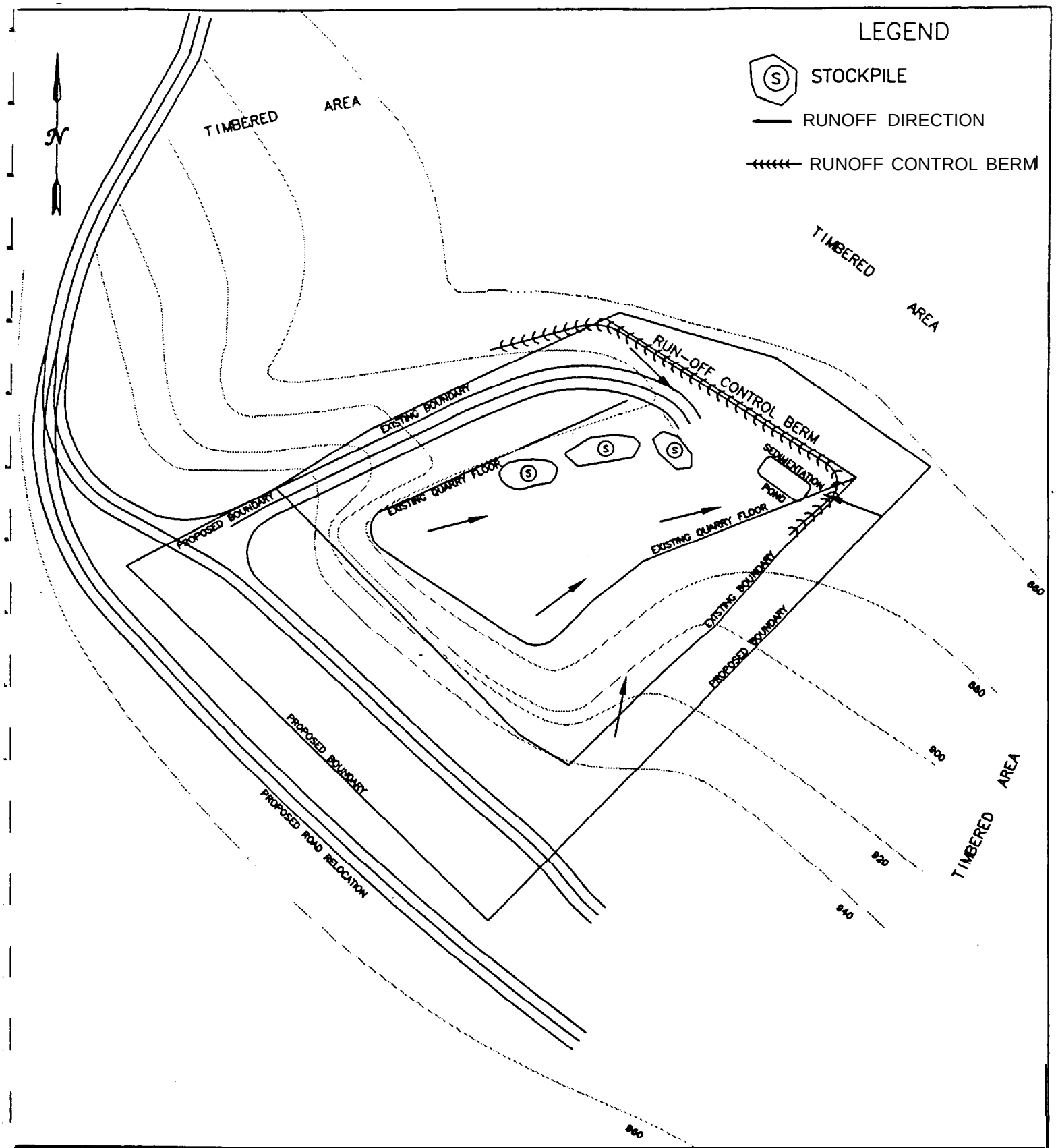
	JOB NUMBER / FIGURE: 4



PALCO

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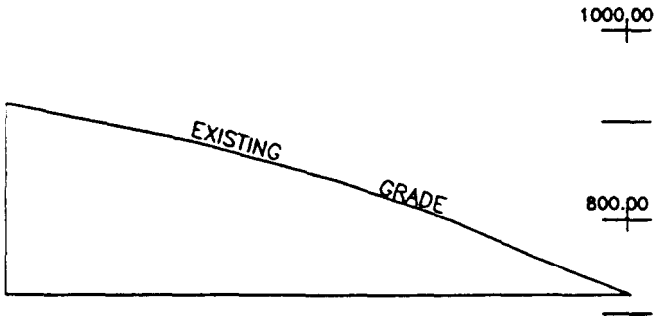
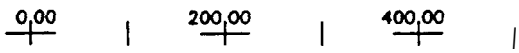
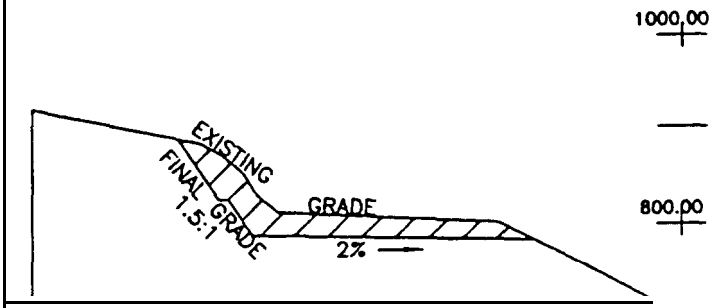
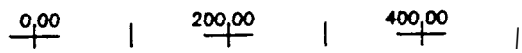
LOCATION: ROAD 24 TAGER	DATE: 4/04/96	
DESCRIPTION: SITE MAP		FIGURE 5





SECTION A/A





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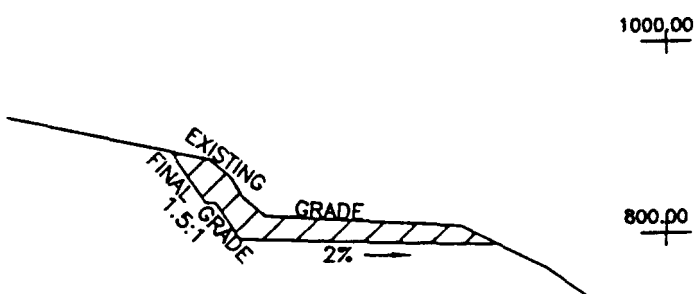

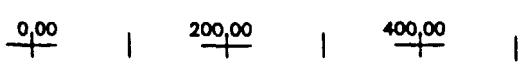

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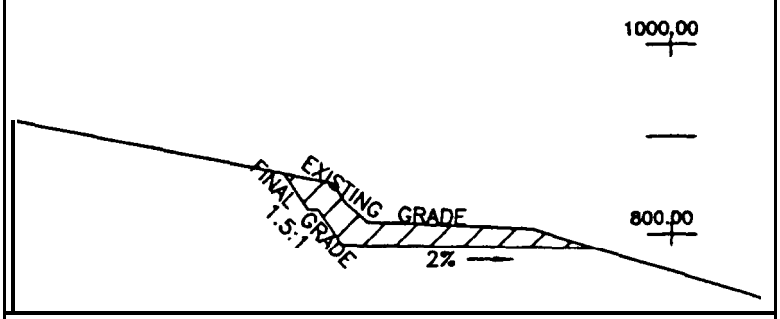

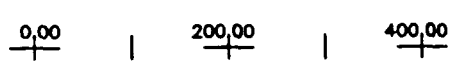

SECTION D/D

PALCO

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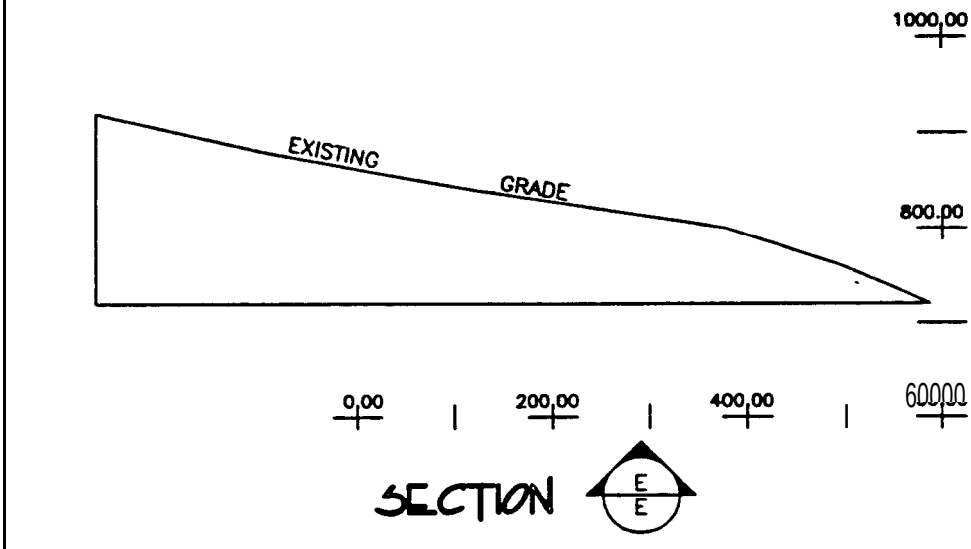
DESCRIPTION: CROSS SECTIONS	JOB NUMBER / FIGURE: 6



SECTION E/E

PALCO

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LOCATION: ROAD 24 YAGER	DATE: 4/04/96
	JOB NUMBER / FIGURE
DESCRIPTION: CROSS SECTIONS	6A

PALCO QUARRY 2, ROAD 9

Quarry 2 is located in the Lawrence Creek Drainage, Yager Creek Watershed, more particularly on AP No. 314-085-01, NW 1/4 of NW 1/4 of Sec 17, T3N, R2E, HBM, laqua Buttes 7.5 minute USGS Quadrangle Sheet. Access to the quarry from US Highway 101 is via State Route 36 to Main Yager Road (on PALCO's property) to Road 9. All access roads to PALCO's property are closed to traffic at the end of the work day.

Environmental Setting

Quarry 2 is operated under an approved Conditional Use Permit ('CUP") from Humboldt County Planning Commission in compliance with the rules and regulations of the California Surface Mining and Reclamation Act ("SMARA"). As with Quarry 1 described above, the purpose of Quarry 2 is to produce hardrock aggregate material for commercial use in addition to on-going "in-house" use, including uses necessary for accomplishing the mitigation and aquatic resource conservation measures provided in this SYP/HCP for the control of sediment from roads and other sources. This quarry has been operated for many years for "in-house" use under an agricultural exemption from Humboldt County. The CUP for this quarry allows PALCO the flexibility to mine aggregate for commercial purposes. The expected life of the project is 15 years, with a total production of about 450,000 cubic yards of aggregate material. Preliminary processing of aggregate material occurs at this quarry site, with most processing occurring at the existing operation on the Yager mainline. The estimated project termination date is 15 years from the date of commencement, approximately in the year 2012. Should extractable rock and/or aggregate stockpiles remain at the time of the proposed termination date PALCO may apply for an extension of the approved Conditional Use Permit and Reclamation Plan. The site will be revegetated with native species following closure of the quarry. The primary use will likely be wildlife habitat as the rocky nature of the site limits future use as productive timber land. No future mining is planned subsequent to the extraction of 450,000 cubic yards of aggregate. Implementation of the reclamation plan will have no effect on future mining in the area.

Public Health and Safety

This quarry is located on private property and is not open to public access. The quarry will be operated by the applicant under all prevailing standards and requirements of CalOSHA. There will be no threat to public health and/or safety at this site.

Geology and Topography

The quarry site lies on a westerly-trending slope between 1280 and 1530 feet in elevation, about 0.25 miles upslope from Lawrence Creek. The slope above Road 9 ranges between 41 and 70%, while that between the road and the bottom ranges from 16 to 30%. The geology of the area is mapped as upper Cretaceous marine sedimentary rocks which define the Yager Formation. This formation is characterized by dark gray mudstone, shale, graywacke, and conglomerate (Strand, 1962). The Geologic Map of California, Redding Sheet (Strand, 1962) shows that the nearest fault is the Freshwater Fault, located approximately two miles to the east.

Soils

Soils in the project area belong to the rocky phase of the Hugo Series. These acidic soils are derived from sandstone and shale, with a gravelly loam on the surface and a stony clay loam subsoil (McLaughlin and Harradine, 1965). The California Department of Forestry (CDF) has developed an Erosion Hazard Rating System (EHR) for use in evaluating potential erosion

hazards associated with timber harvesting. The system uses a method of assigning rating factors to soil characteristics, depth, topography, protective vegetative cover and rainfall expectations. The CDF EHR calculation for the soils in the vicinity of this project is Moderate for those soils above the road and Low for those soils below the road. The mapping of the hazard areas corresponds closely with the slope, with the Moderate EHR corresponding to slopes between 51 and 70%.

Hydrology

There are no streams or bodies of water on or adjacent to the quarry. There is a small stream located about 0.25 miles to the northeast of the site; this will not be impacted by operations at this site. Lawrence Creek lies more than 0.25 miles downslope from the site.

Vegetation and Wildlife

The worked portion of the quarry supports very little (<1% cover) of vegetation. The surrounding area has been harvested in recent years, and currently supports a mix of species. Vegetation noted in the spring of 1996 was detailed in the approved Quarry and Mining Reclamation Plan and included a moderate cover of young growth conifers dominated by coastal redwood (***Sequoia sempervirens***) and Douglas fir (***Pseudotsuga menziesii***) and a moderate hardwood cover dominated by tan oak (***Lithocarpus densiflora***) and Pacific madrone (***Arbutus menziesii***). The shrub layer is moderate to dense in cover and occurs in the open areas and along the road; it is characterized by deer brush (***Ceanothus integerrimus*** var. ***californicus***) with a lesser component of coyote brush (***Baccharis pilularis***) and California blackberry (***Rubus ursinus***). The herbaceous layer is generally fairly sparse in cover, with pampas grass (***Cortaderia jubata***), yerba de selva (***Whipplea modesta***), catchstraw (***Galium*** sp.), willow herb (***Epilobium*** sp.), and cudweed (***Gnaphaleum*** sp.) noted. All species noted are characteristic of north coastal forests. No rare, threatened, endangered or sensitive species were noted during field review nor would any be expected within this habitat.

A wildlife inventory was conducted by PALCO biologists in the vicinity of the Road 9 quarry in summer and fall of 1995. The closest northern spotted owl nest was then located about 6500 feet away from the quarry. The closest marbled murrelet detection is more than 0.5 miles from the site. Bald eagle sightings have been very infrequent this high in the drainage. There are no known sensitive wildlife species which will be affected by on-going operations at this site.

Archaeological and Historical Resources

As detailed in the 1997 approved Mining and Reclamation Plan, a Phase I archaeological report was prepared for the quarry by Mary Rice, a local consulting archaeologist. According to her report, which has been filed with the Humboldt County Planning Department, there are no recorded sites within a one-mile radius of the quarry. No evidence of cultural value was identified during her field review.

Climate and Air Quality

This quarry site is located in an undeveloped rural setting. The climate is characterized by cool, rainy winters and warm, dry summers; annual rainfall is approximately 50 inches per year. Activities which locally affect air quality at this site are blasting, excavation, loading, and hauling. At present these activities are mitigated by sprinkling the site and access road with water.

Noise

This quarry site is located in a timbered area, miles away from residences or other areas of human use. This project may contribute noise during the periods when operations are active. Activities and equipment which generate noise are blasting, rock drilling, excavation, loading and hauling. Drilling and blasting occur infrequently; instantaneous noise levels from rock blasting reach an approximate peak of 100 dBA at the quarry (Newman, 1995). Most of this noise is reflected and absorbed by the surrounding vegetation, with noise levels falling off rapidly with increasing distance from the source.

As detailed in the Mining and Reclamation Plan, a noise analysis of various components of a gravel operation was completed by Mullins Acoustics for Canevari Timber Company in 1993. Noise levels generated by trucks and earth movers (e.g., bulldozers) ranged from 55 to 71 dBA at a distance of 450 feet across level land with little intervening vegetation. The noise generated by trucks hauling on the Yager Main Road is attenuated fairly rapidly due to roadside vegetation.

Land Use

The quarry and surrounding lands are zoned TPZ ("Timber Production Zone"). In Humboldt County rock quarries are a compatible use on lands zoned for timber production. Following closure of the quarry, the site will be reclaimed and revegetated with native species compatible with the surrounding area. Commercial timber species will be planted in an attempt to realize the potential future use as commercial timberland.

Aesthetics

The quarry site is located on private property with no access to the public and there are no known vantage points from which the public could view the site. No visual or aesthetic impacts from or to the proposed mining operation are expected.

Roads and Traffic

Primary access to PALCO's property is via Highway 36, as shown on Figures 1 and 2. The access route to be used from Highway 36 to the quarry will be via PALCO Access Road to Yager Main Road to Road 9, all of which are owned and maintained by PALCO. Existing use of these roads is truck traffic primarily associated with timber management.

Mining Plan

The project area includes the access road off of Road 9, the staging area on Road 9, stockpile areas on the quarry floor, and unworked rock areas. The area quarried to date encompasses about 5 acres; the entire project area encompasses about 9 acres. Figure 4, the Site Map from the approved Mining and Reclamation Plan, shows the pre-existing quarry boundaries, the expanded boundary approved following CEQA and SMARA review, an established benchmark, the staging area, the quarry floor, the sidecast stockpile, the run-off control berm, and the sedimentation pond. Figure 5 shows the project features as well as the location of the cross-section.

The volume of available material is estimated at 450,000 cubic yards. PALCO will operate the quarry over a 15 year period in order to best accommodate the Company's needs for material to fulfill the SYP/HCP requirements for road storm proofing and other impact mitigations, as well as fluctuations in market conditions and demand. The annual duration and intensity of quarry operations will fluctuate seasonally and in response to market demand for the aggregate products

and the need for material to accomplish control of sediment and other measures outlines in this SYP/HCP. Figure 6, Cross-Sections, shows the existing and final grades of the quarry at different transects through the site.

The quarry operations will involve excavation, drilling, blasting, screening, loading and hauling. All additional processing will be done away from the quarry location, at existing facilities on the applicant's property. Activities ancillary to quarry operation include erosion control, annual closure, and final reclamation. Any materials hauled off of the property will be transported by truck down Yager Main Road to State Highway 36. From here the material will continue to be hauled by truck to its destination, or it will be loaded onto rail cars for transport. The rail line runs through the PALCO log deck at Carlotta, where there is already an aggregate storage and loading area designated within the yard. The material will be used primarily for slope stabilization, bedding and road base; it may be sufficiently dense to comply with Army Corps of Engineers specifications.

Operation of the quarry will be seasonal, with most mining occurring from April through November. During this period, the quarry will be operated about nine hours per day, for five to six days per week. Minor quarrying may occur from December through March in response to local demand for material.

Site Preparation - Site preparation will require removal and disposition of existing woody vegetation (young growth conifers, hardwoods and shrubs) within those portions of the project area which have not yet been mined. Herbaceous material will be stockpiled with the overburden, and will decompose to add organic matter to the material.

Excavation - Figure 6 shows existing and finished slopes at four transects through the quarry. The quarry floor will be excavated horizontally a total of 200 lineal feet, and will have a finished grade of 2% away from the slope of the rocky face. The depth of excavation on the floor will range from about 50 feet at cross-section B to 90 feet at cross-section D.

The existing slope of the hill will be excavated horizontally into the slope, at distances up to 150 feet, and with a finished slope of 1.5:1, as shown on Figure 6. Benches will be located on the cut slope, with an average elevation of 60 feet; the benches themselves will be about ten feet in width.

Processing - Initial processing of aggregate is accomplished through a Grizzly screener, which sorts the material by size. The larger, desired material is carried by away by conveyor, while the remaining overburden falls off the side. Both materials are then transported away for use or storage. The screening process will result in an increase in the ambient noise level due to shaking of the material. As described above and in the approved 1997 Mining and Reclamation Plan, noise levels generated by a washer/shaker at the Canevari Gravel Processing Plant on the Eel River were measured as 64 dBA at a distance of 450 feet across level land with little intervening vegetation. Additional processing may also occur at the existing processing facility at side 8 on the Yager Mainline.

Water Requirements - Water will be used for on-site dust control, and will be administered from a tanker truck. The site will be sprinkled one to several times per day, depending on the weather. Sprinkling will occur more frequently during the late summer and early fall.

Men/Equipment - On average, there are six employees working at the quarry on a regular basis. During maximum production, there may be about thirty trucks hauling aggregate from the site per day.

Safety - Applicable Occupational Safety and Health Administration (OSHA) regulations are in place and enforced during the life of the operation. Personnel are supplied with protective masks and hearing protection for use during operation of equipment and during blasting.

Solid Mine Waste - There will be no solid waste generated as a result of this project. Most of the project area has been cleared of woody vegetation; remaining saplings and shrubs are removed from the site for disposal. Herbaceous species are removed and stockpiled on-site with the overburden. There is no mineral waste; all material is either overburden or aggregate. Periodically, the sedimentation pond is excavated, and the fines stockpiled for eventual use in final closure of the site.

Waste Water - Very little if any wastewater is produced. Most of the water used for dust control will be absorbed by the finer silt and clay fractions or will evaporate.

Water Impoundments/Diversions - All runoff from the site will be routed to the sedimentation pond in the northwesterly corner of the quarry, as shown on Figure 6. A run-off control berm is in place at the downslope edge of the quarry to ensure that there is no surface flow off of the site. This berm and the sediment pond will be maintained throughout the life of the project.

Contaminants - No naturally occurring contaminants, such as heavy metals, are expected to be produced as a result of this project. Fuel will be stored on site for short periods of time; all necessary precautions are taken to prevent and/or contain spillage.

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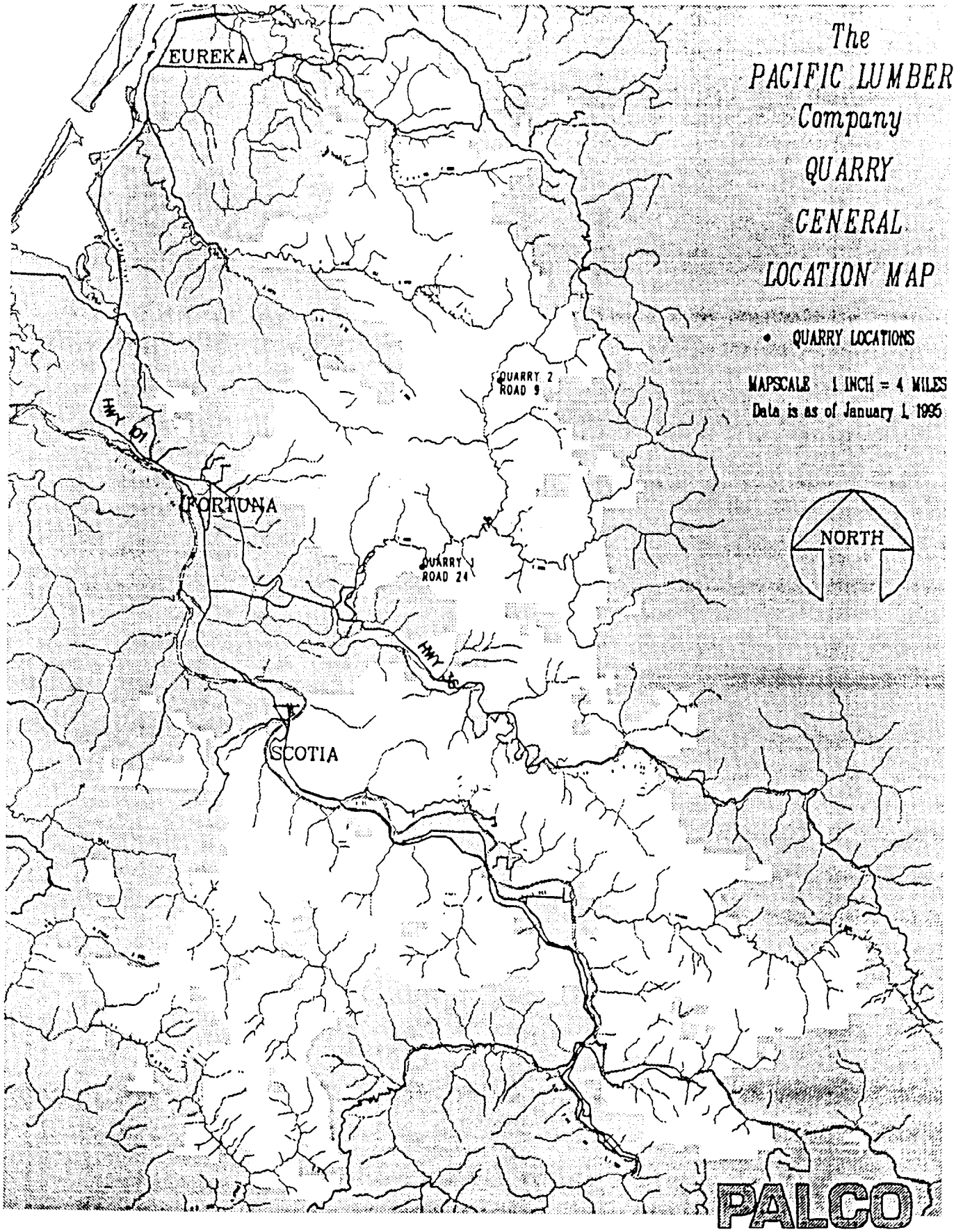
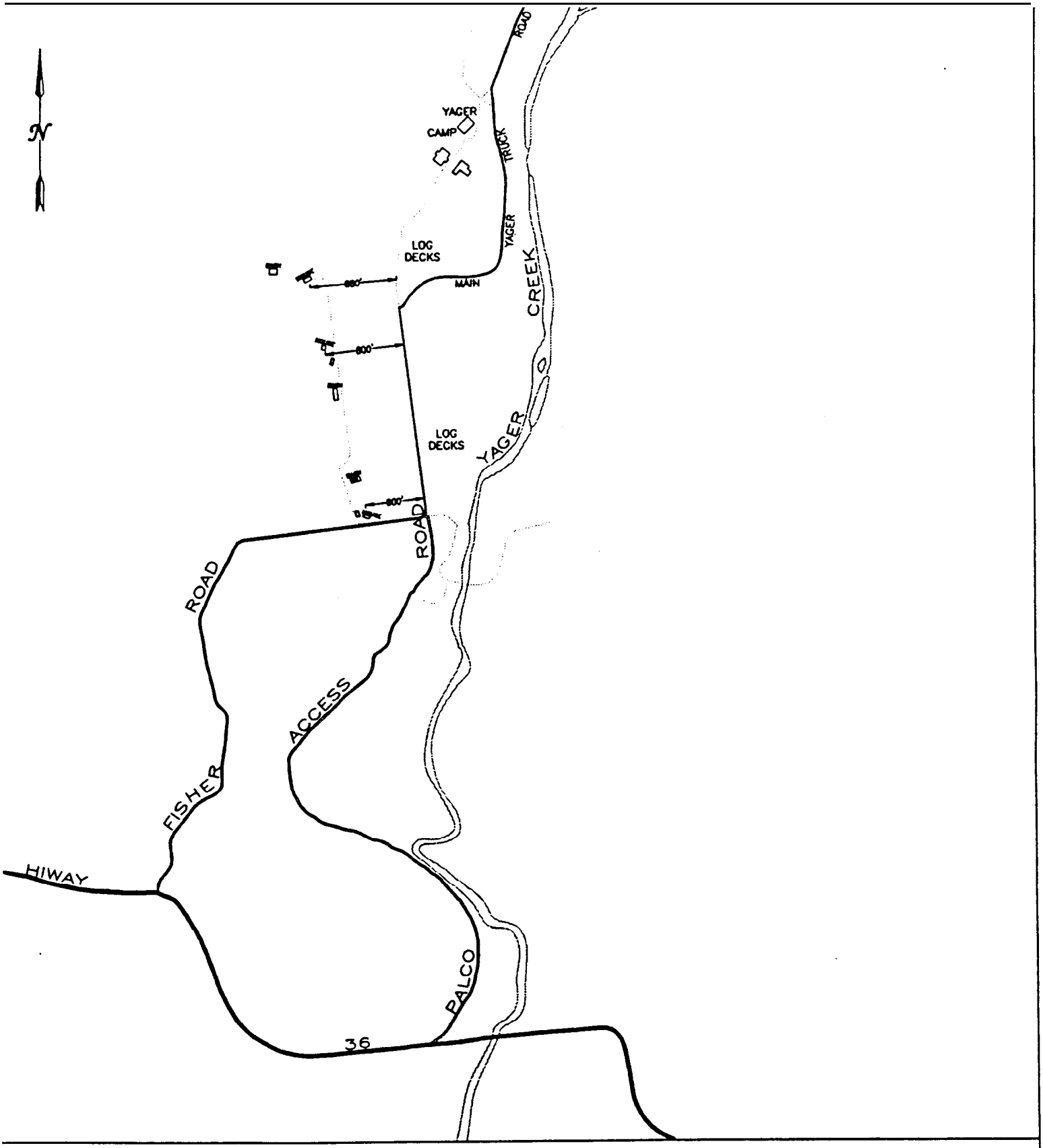


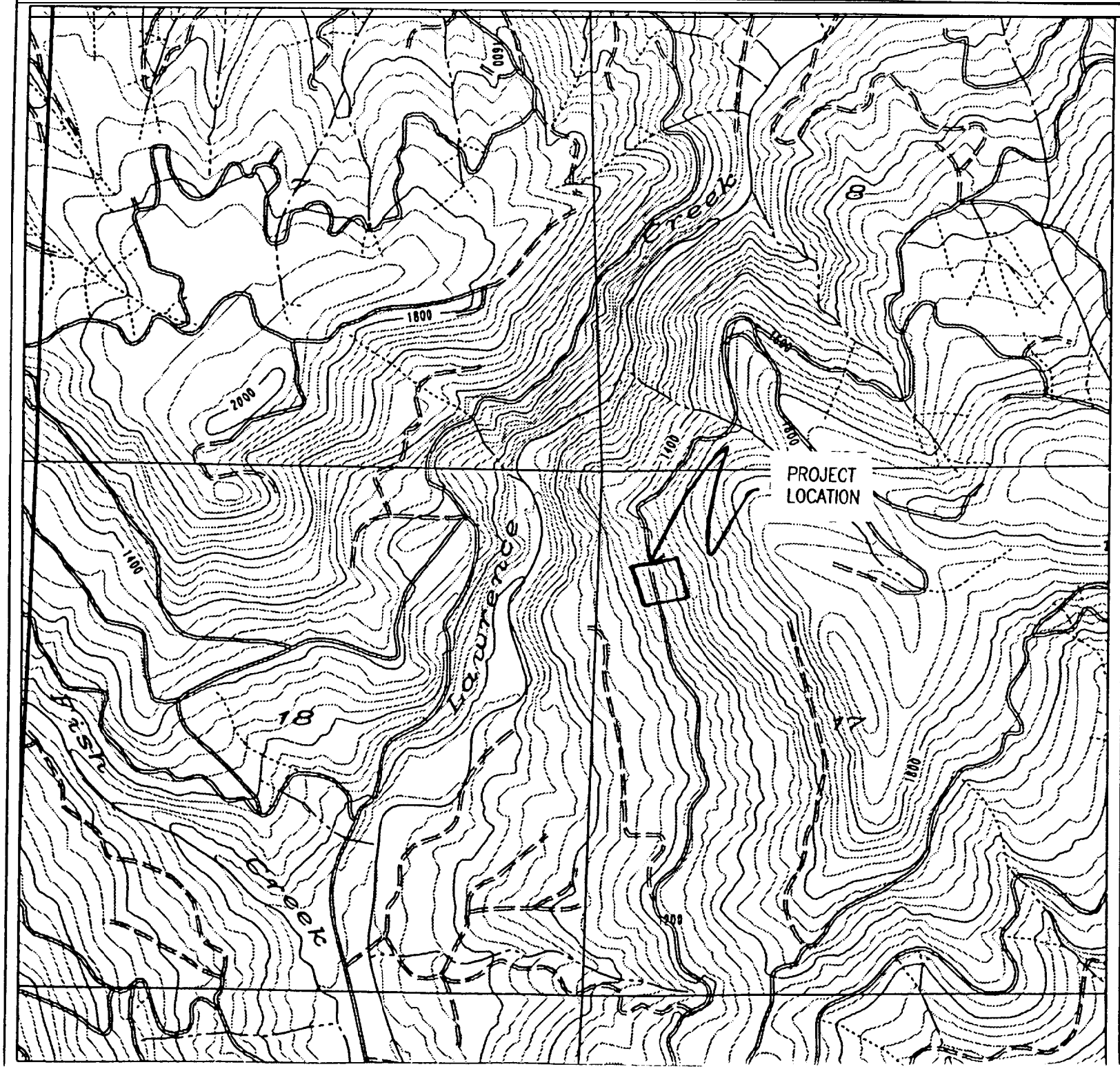
FIGURE

Road 9 Quarry 2



PALCO

JOB NAME: YAGER QUARRY 8	DRAWN BY: RKH	CHECKED BY*
	SCALE: 1"=1/4 MILE	
LOCATION: INTERSECT. YAGER & FISHER RD	DATE: 5/06/96	
DESCRIPTION: SITE ACCESS MAP		FIGURE 2 △



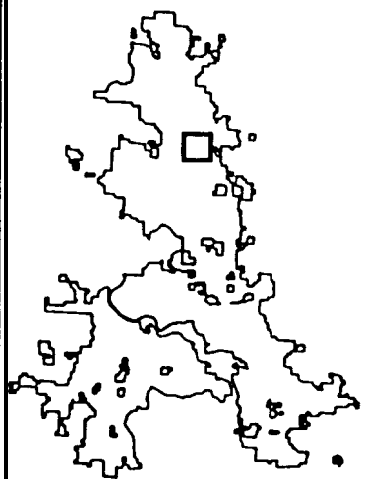
PROJECT LOCATION

QUARRY 2
ROAD 9
YAGER CREEK

Figure 3

Scale 4" = 1 mile

Lands of the Pacific Lumber Company



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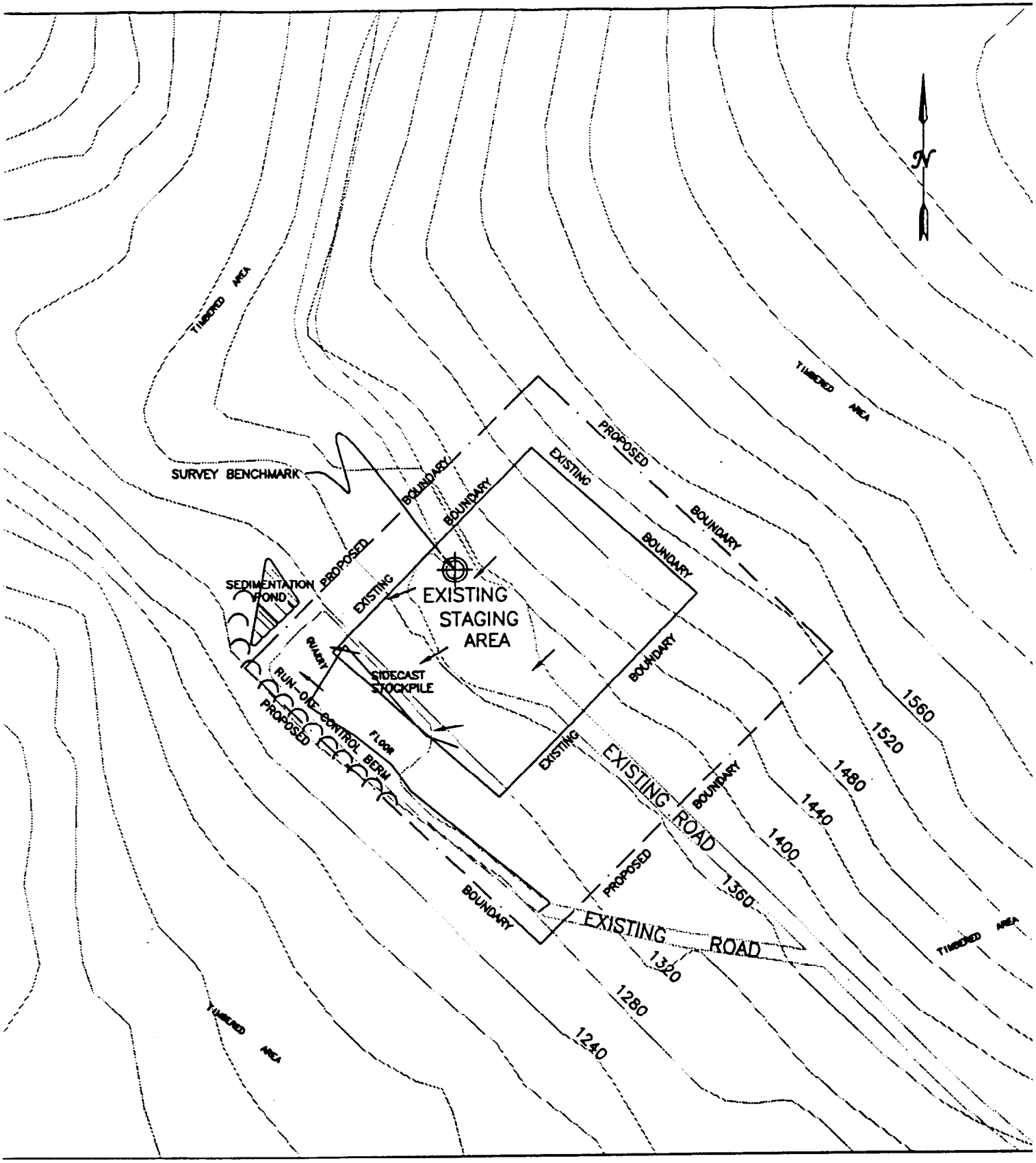
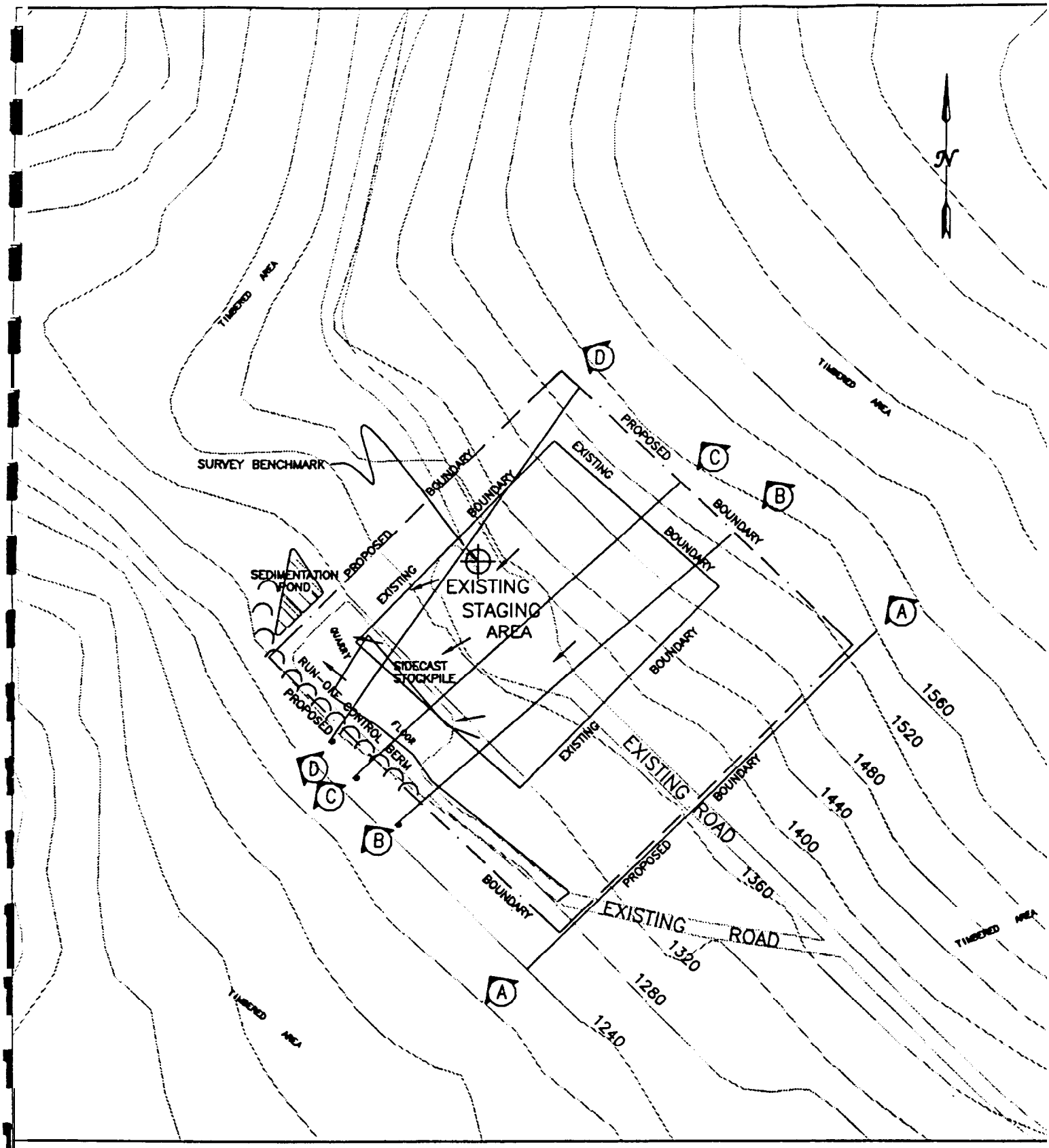


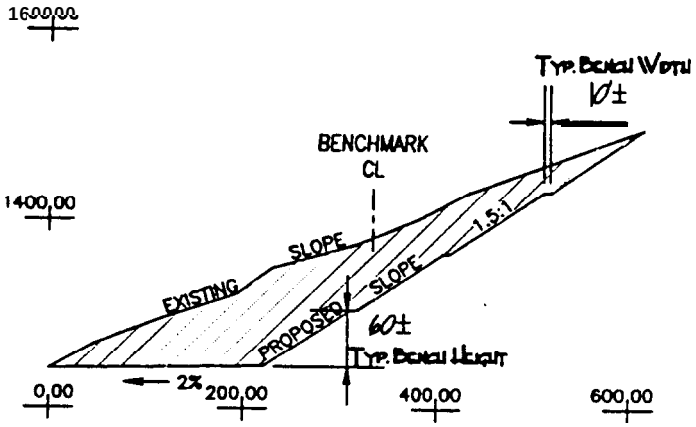
PALCO

JOB NAME: QUARRY 2	DRAWN BY: RH CHECKED BY:
LOCATION: ROAD 9 YAGER	SCALE: 1"=200
DESCRIPTION: SITE MAP	DATE: 4/04/96
	FIGURE 4

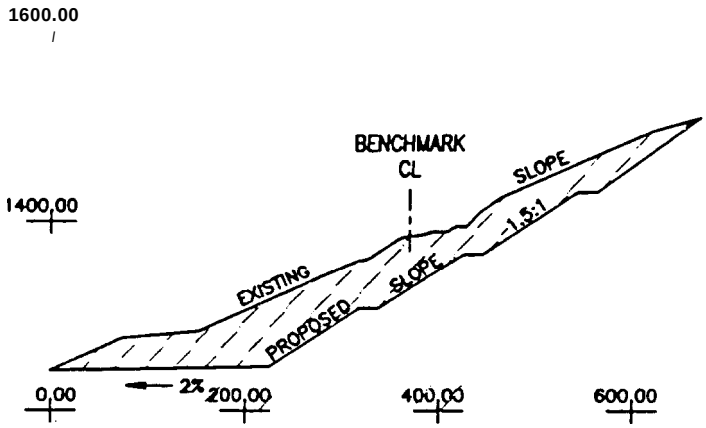


PALCO

JOB NAME: QUARRY 2	DRAWN BY: RKH CHECKED BY:
LOCATION: ROAD 9 YAGER	SCALE: 1"=200'
	DATE: 4/04/96
DESCRIPTION: X-SECTION LOCATION	FIGURE 5



SECTION A/A



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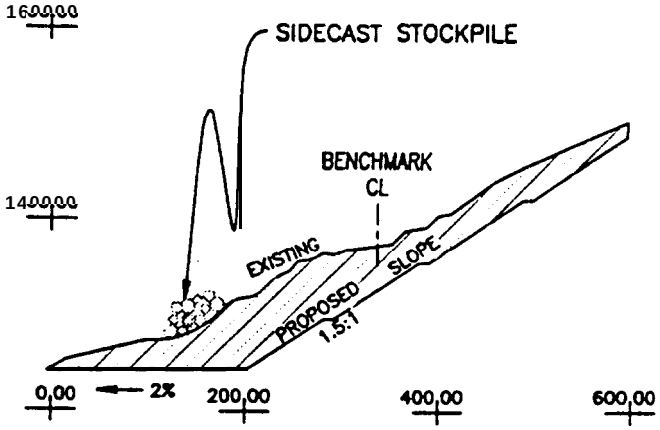

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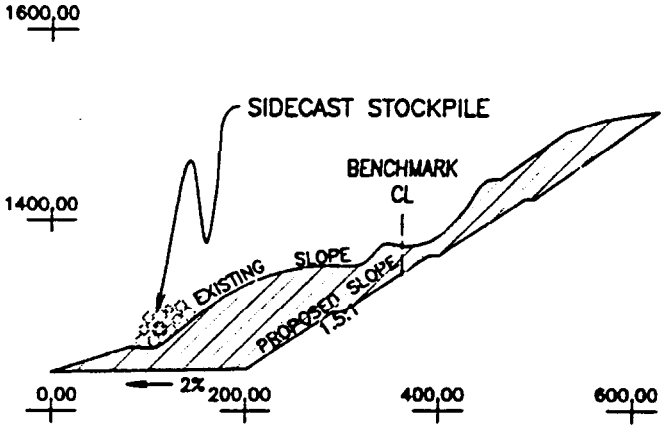

SECTION D/D

PALCO

JOB NAME: QUARRY 2	DRAWN BY: RKH CHECKED BY:
	SCALE: 1"=200'
LOCATION: ROAD 9 YAGER	DATE: 4/04/96
	FIGURE
DESCRIPTION: CROSS SECTIONS	6

Reclamation Plan

A detailed plan for reclamation and closure of each quarry was prepared by Karen Theiss and Associates in February 1997, reviewed pursuant to CEQA, SMARA and the Humboldt County Surface Mining Regulations, and approved on March 20, 1997 by the Humboldt county Planning Commission. That plan is filed herewith and incorporated herein by this reference. Below PALCO provides a summary of the reclamation terms and conditions.

Desired Future Use

Reclamation is a combination of processes designed to establish conditions which are "readily adaptable for alternate land uses and create no danger to public health or safety" (SMARA Section 2733). The reclamation goal at these sites is to establish forest vegetation and habitat similar to that on adjacent land, with interim use as wildlife habitat and ultimate use for timber production.

Reclamation activities will be staged throughout the life of the quarry projects. Some will be concurrent with project operation; some will occur at the close of the annual season; some will occur on an intermittent basis; and some will occur at the end of the project.

Reclamation Activities and Schedule

Concurrent Reclamation - Concurrent reclamation proceeds as part of the daily and weekly operations of the quarry. A log book is maintained on-site with a list of procedures for daily and weekly inspection. Activities include short-term maintenance and long-term preparation for final reclamation:

a. removal and stockpiling of all overburden and topsoil material;

b. maintenance of runoff containment berm and sedimentation pond;

c. grading of quarry floor to keep runoff within the berm, and prevent drainage from going off-site;

d. placement of straw berms or utilization of other erosion control methods to avoid uncontrolled surface runoff.

Annual Reclamation - Active quarrying is minimal during the winter months. Blasting of material at the site occurs between October 15 and April 15 in order to avoid impacting sensitive wildlife which may move into the area. Some production may occur during this period in response to local needs or to facilitate the aquatic resource conservation and mitigation measures to control sediment from roads and other sources as provided in this SYP/HCP. Annual closure of the quarry includes the following tasks:

a. maintenance of runoff containment berm and sedimentation pond;

b. placement of straw berms and straw mulching of bare surfaces to minimize erosion.

Interim Reclamation - As provided in the Quarry Mining and Reclamation Plan, interim reclamation will occur on portions of the permitted site which will not be mined for a period of five years or more. This would likely occur only under conditions of suppressed demand for material, a condition not anticipated at this time. The goal of interim reclamation is to stabilize the inactive area and to minimize potential erosion from the site. Activities could include:

a. ripping of all compacted areas to allow for seed and water penetration;

b. grading of all areas so that runoff drains toward the sedimentation pond;

c. hydroseeding with blue rye (***Elymus glaucus***) and California brome (***Bromus californicus***).

Final Reclamation - Pursuant to the approved Quarry Mining and Reclamation Plan, final reclamation will commence immediately following cessation of mining, and will include the following:

a. Final Site Contour and Erosion Control - The site will be graded and contoured to conform with the adjacent landscape. The finished grade of the quarry will not exceed a ratio of 1.5:1.

b. Distribution of Overburden and Topsoil - The stockpiled overburden and topsoil will be spread over the site in order to provide suitable substrate for successful revegetation.

c. Revegetation - The site will be planted with woody species following, at a minimum, the stocking rates required by the California Forest Practices Act at the time of closure.

Performance Standards

Operation and reclamation of each of the permitted PALCO quarries is undertaken with reference and in compliance with several specific performance standards. These are more particularly detailed in the February 1997 Mining and Reclamation Plan prepared by Karen Theiss and Associates, Biological and Environmental Consultants, filed with this SYP/HCP and incorporated herein by this reference. Below is a brief summary of these performance standards.

Performance Standards for Wildlife Habitat

Goal

a. Avoidance of impact to sensitive wildlife species.

b. Establishment of habitat similar to that existing on adjacent lands.

Tasks

a. Operation of PALCO's quarries will comply with all restrictions and conditions for wildlife protection applicable to management activities on its lands included in this SYP/HCP, in addition to those conditions and restrictions attending approval of the applicable mining and reclamation plan approved March 20, 1997. A copy of the Conditions of Approval, Operations Restrictions, Terms and Requirements imposed by the County of Humboldt for these quarries ***in addition*** to those detailed in the Reclamation Plan has been submitted to the agencies reviewing this SYP/HCP and are part of the administrative record for this Plan.

b. The site will be stocked with forest species at the end of operations in order to provide habitat similar to that on adjacent lands.

Performance Standards for Backfilling

Goal - To establish contours and grades which conform to those on adjacent areas in order to maximize the potential for revegetation success and minimize substrate erosion.

Tasks

a. All compacted areas will be ripped, disked or otherwise treated to allow for root and water penetration.

b. The final slope will conform to that on adjacent areas, and will not exceed a ratio of 1.5:1 (horizontal:vertical).

c. No drainage swales or water impoundments will be created as a result of final grading.

d. Final grading will direct surface run-off toward non-erodable areas and natural drainages down slope from the site.

e. The runoff control berm will stay in place, and will not be lowered in elevation.

Performance Standards for Interim Revegetation

Goal - To establish vegetation on areas which will not be worked for a period of five or more years.

Tasks

a. All compacted areas will be ripped, disked or otherwise treated to allow for root and water penetration.

b. All planting areas will be hydromulched and seeded for interim revegetation. Certified weed-free rice straw or its equivalent will be used for hydromulching. Straw will be applied at the rate of two tons per acre in order to provide cover and organic material for the seed and seedlings.

c. The areas will be seeded with a mixture of blue rye (***Elymus glaucus***) and California brome (***Bromus californicus***), both of which are successful in the revegetation of harsh sites. The total seed mixture will be seeded at a rate of fifty pounds per acre. Seed will be sown in the fall, between October 1 and December 1, in order to take advantage of the winter rains.

Success Standards - The success standard is a surface cover of 40% after two full growing seasons. Early successional native species are expected to colonize the planting areas and provide cover along with the planted grasses. Should the success standard not be met after two growing seasons, the area shall be reseeded with the same grass species or with other species deemed more suitable for the particular conditions at the site.

Performance Standards for Final Revegetation

Goal - To establish forest vegetation with commercial timber species on the quarry site following final closure.

Tasks

a. Following grading and placement of soil as described below, the entire area will be planted with a combination of Douglas fir (***Pseudotsuga menziesii***) and red alder (***Alnus rubra***) seedlings, following stocking procedures of the California Department of Forestry at the time of planting. The quarry is located in a transition area between coast redwood and Douglas fir forest. Douglas fir was selected for stocking because it is expected to have a higher chance

for success in this relatively dry and warm location. The red alder was included in the revegetation for its role in nitrogen-fixation.

b. Two-year old Douglas fir seedlings will be planted at the rate of 300 per acre.

c. One-year old red alder seedlings will be planted at the rate of 75 or less per acre. In lieu of seedlings, the area can be hydroseeded with red alder seed in a concentration designed to result in a population size equal or less than 20% cover by stem.

d. The red alder will be thinned and/or removed as it shades the Douglas fir, as determined by staff forester at the time.

e. The seedlings will be mechanically protected from deer browse by proven techniques at the time of planting.

Success Standard - Standards of success for revegetation are based on stocking goals of the CDF for commercial timberland. The planting of 300 Douglas fir seedlings per acre allows for a 20% mortality rate, resulting in 240 seedlings per acre.

Performance Standards for Drainage, Waterways, and Erosion Control

Goal - Surface mining operations and reclamation shall be undertaken so as to minimize soil erosion from the site and to protect downstream beneficial uses of water in accordance with State and Federal laws. The quarry area will produce sediment discharge levels consistent with natural levels associated with the adjacent area at the completion of the reclamation activities. There are no downslope perennial or intermittent watercourses within 0.25 miles of the quarry.

Tasks

a. Soil erosion from exposed quarried areas and stockpiles will be minimized during the operating phase of the quarry by use of standard erosion control measures, including the use of straw bales, straw mulching, hydroseeding, and/or placement of aggregate cover.

b. Surface runoff, erosion and drainage from the site will be controlled during all phases of the mining operation by grading of the quarry floor and the installation and maintenance of a runoff control berm and a sedimentation pond.

Evaluation - Annual monitoring will assess the effectiveness of the runoff control berm and the sedimentation pond in controlling erosion. Remediation measures will be proposed should it appear that the runoff control berm and/or the sedimentation pond are not functioning properly or effectively.

Performance Standards for Topsoil Salvage, Maintenance, and Redistribution

Goal - All overburden and topsoil material will be removed and conserved for resoiling during final reclamation.

Tasks

1. The operator will stockpile all overburden and topsoil on the quarry site; these stockpiles will be clearly differentiated from piles of mine waste.

2. Topsoil and overburden stockpiles will be treated for erosion control by covering with rock aggregate, mulched with straw, and/or hydroseeded with blue rye (***Elymus glaucus***) or California brome (***Bromus californica***).

Evaluation - Annual monitoring for wind and water erosion will be accomplished in conjunction with erosion control monitoring on the entire site. Recommendations will be made should it appear that erosion of the overburden and topsoil are occurring.

Goal - To provide a suitable substrate for successful revegetation of the site.

Tasks

1. Topsoil shall be redistributed in a manner that results in a stable, uniform thickness consistent with the approved end use, site configuration and drainage patterns;

2. The combined redistributed overburden and topsoil shall be a minimum of three feet thick over bedrock or other impervious layer in order to provide sufficient substrate for root penetration and plant nutrition.

LETTERS OF COMMENT AND RESPONSES

JANUARY 31, 1997
MINING AND RECLAMATION PLAN
ROCK QUARRIES 1 AND 2
PACIFIC LUMBER COMPANY, HUMBOLDT COUNTY

RESPONSE TO COMMENTS
JANUARY 31, 1997

Comments were received from several agencies on the Negative Declaration for the Proposed Surface Mining Permit, Reclamation Plan, and Financial Assurances for Pacific Lumber Company, PALCO Rock Quarries 1 and 2 (File No: APN 206-021-06, CUP-09-96, SMP-01-96, RP-01-96. Following is a list of commenting agencies, and narrative addressing the concerns raised. The full letters of comment are on file with the agencies with reviewing this SYP/HCP.

Humboldt County Planning Department, Assistant Planning Director - Most of the issues raised were on procedural matters directed to staff. The Assistant Director asked if the project is in the Headwaters Forest area; the answer is no.

Humboldt County Department of Public Works, Natural Resources Division - No issues were raised.

Humboldt County Division of Environmental Health - No issues were raised.

Humboldt County Department of Public Works, Land Use Division - Staff states that gravel-related traffic is authorized to use Fischer Road, and recommends that the project be conditioned to require all such traffic to use the PALCO Road. The applicant does not object to this proposed condition.

North Coast Unified Air Quality Management District - The applicant will comply with all applicable air quality requirements, as raised in the letter, and specifically will obtain a District permit for the operation of crushing or screening equipment prior to beginning operations.

California Regional Water Quality Control Board, North Coast Region - The applicant will collect and contain all stormwater runoff within the project boundaries so there will not be any discharge from the project site. Erosion control work will be undertaken as needed to prevent discharge from the site. Following verbal consultation with Richard Azevedo with the North Coast Regional Water Quality Control Board, neither an NPDES permit nor a Stormwater Pollution Prevention Plan will be required if stormwater is contained within the project boundaries as planned.

California Department of Conservation Office of Mine Reclamation

1. Comment: "OMR recommends that quarry excavation proceed from the upper hillslope location and work the cut down the hillside. The purpose is twofold. The applicant's proposal is to use the natural properties of the rock to determine the ultimate slope gradients and bench design as the excavation progresses. If it is found that the rock encountered would be stable at a lesser gradient, there would be an opportunity to reduce the overall slope angle until a stable slope can be achieved. OMR recommends that the slopes excavated in this manner be periodically (annually is best) inspected by a Registered Civil Engineer or Certified Engineering Geologist."

"The second advantage is that this approach will allow reclamation of the benches as quarrying progresses. With less disturbed (un-reclaimed) acreage, the performance bond or financial

assurances can be reduced. It is noted that the applicant already states that this mode of operation would begin in five years from the present date, depending on the rate of production."

Response: The applicant agrees with the comment and will have the slope inspected by a Registered Civil Engineer or Certified Engineering Geologist on an annual basis. The applicant also intends, as stated in the Plan, to reclaim the benches as quarrying progresses.

2. Comment: "CCR Sections 3706 and 3710 require that surface and ground water be protected in accordance with the Porter-Cologne and Clean Water Acts as implemented by the Regional Water Quality Control Board (RWQCB) and the State Water Resources Control Board (SWRCB). Regulations approved by the SWRCB require that a mine site which discharges storm waters that may have contacted any overburden, raw material, intermediate products, by-products, or waste products on the mine site obtain a general industrial activities storm water permit and submit a Storm Water Pollution Prevention Plan (SWPPP). OMR recommends the applicant consult with the RWQCB to determine if these requirements are applicable to this operation. If the permit and the SWPPP are obtained and will be used to satisfy the surface water quality requirements of SMARA, the relevant erosion control measures and monitoring requirements should be incorporated into the reclamation plan submitted for review.

If the SWPPP is not required, OMR recommends that the reclamation plan include a discussion of the type(s) of erosion control treatments that will be employed on site. Erosion control measures employed on site should be designed to handle runoff from not less than the 20-year, 1 hour intensity storm event. Evaluation of the erosion control methods employed at the site should be done as part of the SMARA annual inspection."

Response: Richard Azevedo at the North Coast Regional Water Quality Control Board was contacted with regard to the need for an NPDES permit and/or a SWPPP. All on-site drainage at both quarries will be routed to sedimentation ponds contained within the project boundaries, as described in the plan. No wastewater from dust control or stormwater will be allowed to run off-site. Since all waters will be contained, and there will be no discharge, neither an NPDES permit or a SWPPP is required. The quarry at Road 24 has been inspected since the severe storms at the end of December 1996. All erosion control measures stormwater collection systems remained intact and functional during this period. Due to a bridge wash-out, the facilities at Road 9 quarry have not yet been inspected.

3. Comment: "The reclamation plant states that at both sites, small woody vegetation will be removed from the site. OMR recommends that the vegetation be chipped on site and added to the growth media stockpile. The chipped plant material will add organic matter and aid in establishing soil structure in the growth media stockpile. Optimum soil will greatly enhance plant establishment."

Response: All non-merchantable woody material will be chipped on site and added to the growth media stockpile, as requested.

4. Comment: "The reclamation plan states that California Brome (***Bromus californicus***) will be hydroseeded with blue rye (***Elymus glaucus***) to provide interim erosion control on inactive areas. There is no ***Bromus*** with the specific epithet ***californicus***. The correct species name is ***Bromus carinatus.*** Hydroseeding with native grasses can be problematic since many of these grasses have long awns (plant parts) that interfere with seeding machinery. OMR recommends that test plots be established to determine the most effective and economical method to disperse seed."

Response: James Pompy, of the Office of Mine Reclamation, was contacted with regard to the revegetation comments. He agreed that since the seeding with blue rye and California brome will be for interim revegetation only, that test plots need not be established.

5. Comment: "The success standards set forth in the reclamation plan state the reclamation will be successful when the surface cover of the seeded area is 40 percent. CCR Section 3705(m) requires that the reclamation plan include success criteria that can be quantified by cover, density, species-richness, and a sample size that provides a minimum 80% confidence level. OMR recommends that, for areas to be seeded with grass species, a typical success criteria include percent cover and species richness in several randomly chosen plots. A measurement of species richness would ensure that the 40 percent cover is not all one species or 40 percent weeds."

Response: The success standard of 40% cover, as specified in the plan, will need to be met. Species richness will be included as suggested by OMR.

Comment: "The reclamation plan states that monitoring of the interim revegetation area will be conducted for two years. There is no monitoring plan for final reclamation. The reclamation plan states that final reclamation will be deemed complete when 240 seedlings survive per acre. OMR recommends that for those areas intended to be reforested, a specific number of surviving conifer trees after a given time (e.g. 5 years) be chosen to represent when revegetation success has been achieved. If that number cannot be met, then replanting or the development of remedial measures should take place."

Response: The applicant will adopt the recommendation of a success standard of 240 surviving seedlings per acre five years after planting.

6. Comment: "In addition to providing technical assistance and review of reclamation plans, OMR is authorized to review the financial assurance cost estimate prior to lead agency approval of the financial assurance for reclamation. The cost estimates submitted with the reclamation plans do not provide enough detail for us to determine their adequacy. The cost estimates appear to reflect the operator's costs; however, the Financial Assurance Guidelines define that cost estimates should reflect costs for the lead agency or a third party contractor to complete reclamation of the site.

OMR notes that the estimate for PALCO Rock Quarry 2 is identical to the estimate for PALCO Rock Quarry 1 despite the fact that PALCO Rock Quarry 2 has three times the disturbed acreage of PALCO Rock Quarry 1. It is recommended that these estimates be amended to address the comments provided below and that Humboldt County review them prior to final approval. OMR offers the following suggestions as you consider the cost estimates for both sites."

Response: The financial assurance cost estimates for each quarry have been re-evaluated in light of the comments from OMR, and are on the following two pages. As per additional remarks under Comment 6:

a. The estimates have been changed to include mobilization costs to and from the site, per OMR request.

b. The estimates have been changed to include all unit costs, labor-hours, equipment types, etc. used to determine the assurance amounts, per request. They also identify the amount of material to be moved or redistributed during final grading, ripping and resoiling, per request.

c. Removal of the grizzly screener has been included in the estimate.

d. Virtually no stockpiling is planned for either site; all stockpiling will be at the Carlotta industrial mill site. Should there be any stockpiles at the end of the season, the material will be removed to the Carlotta mill site.

e. The quarry walls will be mined on a 1.5:1 slope, and will not require blasting or scaling of highwalls. This will create a very stable slope.

f. The cost estimates for revegetation have been amended. The average cost for seed is $8.00 per pound and for seedlings, including protectors, $1.45 each.

QUARRY 1
ROAD 24

1.	Equipment mobilization to and from site:		
	D-8 Tractor, lowboy & driver	2 hr @ $65/hr	$ 130.00
	Hydraulic loader, lowboy & driver	2 hr @ $65/hr	$ 130.00
	Grizzly, truck tractor & driver	2 hr @ $50/hr	$ 100.00
2.	Final grading, ripping & resoiling:		
	D-8 tractor, grading and ripping	8 hr @ $120/hr	$ 960.00
	D-8 tractor, resoiling; 1500 yds	8 hr @ $120/hr	$ 960.00
	Operator	16 hr @ $47.50	$ 760.00
3.	Seeding and Mulching:		
	Seeding (2 acres @ 50lb/ac)	100 lb @ $8/lb	$ 800.00
	Straw Mulch (2 ac @25 bales/ac)	50 bales @ $325/ac	$ 650.00
	Labor	8 hr @ $34/hr	$ 272.00
	Straw Blower	4 hr @ $15/hr	$ 60.00
	4x4 truck	4 hr @ $15/hr	$ 60.00
	Hydroseeder	4 hr @ $75/hr	$ 300.00
4.	Planting:		
	Seedlings & protectors	3.5 acres @ 375ea/ac @ $1.45 ea	$ 1,903.00
	Labor	8 hr @ $68/hr	$ 544.00
5.	Stockpile removal, if necessary		$ 1,500.00
6.	Site visit for monitoring:		
		2 1-day visits @ $400/day	$ 800.00
7.	Contingency		$ 1,000.00
TOTAL FINANCIAL ASSURANCE			$10,929.00

QUARRY 2
ROAD 9

1.	Equipment mobilization to and from site:		
	D-8 Tractor, lowboy & driver	2.5hr @ $65/hr	$ 162.50
	Hydraulic loader, lowboy & driver	2.5 hr @ $65/hr	$ 162.50
	Grizzly, truck tractor & driver	2.5 hr @ $50/hr	$ 125.00
2.	Final grading, ripping & resoiling:		
	D-8 tractor, grading and ripping	16hr @ $120/hr	$ 1,920.00
	D-8 tractor, resoiling; 3,500 yds	16hr @ $120/hr	$ 1,920.00
	Operator	32 hr @ $47.50	$ 1,520.00
3.	Seeding and Mulching:		
	Seeding (6 acres @ 50lb/ac)	100 lb @ $8/lb	$ 2,400.00
	Straw Mulch (6 ac @25 bales/ac)	300 bales @ $325/ac	$ 1,950.00
	Labor	16 hr @ $34/hr	$ 544.00
	Straw Blower	8 hr @ $15/hr	$ 120.00
	4x4 truck	8 hr @ $15/hr	$ 120.00
	Hydroseeder	8 hr @ $75/hr	$ 600.00
4.	Planting:		
	Seedlings & protectors	9 acres @ 375ea/ac @ $1.45 ea	$ 4,893.00
	Labor	16 hr @ $68/hr	$ 1,088.00
5.	Stockpile removal, if necessary		$ 1,500.00
6.	Site visit for monitoring:		
	2 1-day visits @ $400/day		$ 800.00
7.	Contingency		$ 2,000.00
TOTAL FINANCIAL ASSURANCE			$21,825.00

EXHIBIT "A"

APPROVAL OF THE CONDITIONAL USE PERMIT, SURFACE MINING PERMIT AND RECLAMATION PLAN IS CONDITIONED ON THE FOLLOWING TERMS AND REQIREMENTS:

A. Conditions of Approval:

1. Financial Assurances to ensure reclamation is performed in accordance with the approved reclamation plan shall be entered into with the County of Humboldt and the State Geologist per PRC Section 2773.1.

2. The applicant shall submit a "wet signed" statement naming the person or persons who accept responsibility for reclaiming the mined lands in accordance with the approved reclamation plan and PRC Section 2772.

3. A tiling fee of $1,275.00 dollars must be paid to the County Recorder at 825 Fifth Street, Room 235 in Eureka. A copy of the receipt must be submitted to the Planning Division to satisfy this condition. This fee is required by state law to cover the cost of processing the Certificate of Environmental Review Exemption to the Department of Fish and Game.

4. The applicant shall reimburse the Planning Division for any processing costs that exceed the application deposit. The excess processing costs accrued and projected to-date (February 13, 1997) are $ 337.48.

5. Pursuant to the California Code of Regulations Section 3697, the owner or operator of a newly-permitted 'operation shall submit an initial report and reporting fee to the Department of Conservation (DOC) after permit approval. The DOC has developed the New Mining Operation Report form, please contact DOC at (916) 323-9198 to obtain a form. The condition shall be satisfied by submitting to the County the completed yellow Lead Agency copy of the New Mining Operation Report form.

B. Operation Restrictions:

1. The mining operator shall adhere to the approved Mining & Reclamation Plan and mitigation monitoring program. The reclamation plan shall be reviewed annually by the operator and county staff to assure that any required reclamation is completed and is in compliance with the approved reclamation plan. Any substantial changes to the reclamation plan, including changes necessitated or required by changes in the riverine environment, may require review by the Division of Mines & Geology, Reclamation Program, and approval by the County.

2. The applicants/operators shall abide at all times to the Humboldt County Surface Mining Regulations, and any revisions thereto, and the State Surface Mining and Reclamation Act, and any revisions thereto.

3. The terms of this conditional use permit and reclamation plan shall be the maximum allowed under current regulations, therefore, fifteen years from the effective date. The applicant may renew the use permit and/or reclamation plan by submitting appropriate forms and fees in effect at the time of renewal.

4. The operator shall be responsible for submitting to the State Geologist, on forms provided by the State Geologist, an annual report per PRC Section 2207.

5. Hauling along public roads shall be limited to "legal loads" only. "Overweight loads" must have prior approval from the Department of Public Works and/or CalTrans.